

Abstract of the Disclosure

A multi-loop oscillator which can control variation of an oscillating frequency of a ring oscillator according to 5 variation of a supply voltage is disclosed comprising: first to Nth delay loops, wherein oscillation signal having a predetermined period is generated by selecting one of first to Nth delay loops according to potential variation of a supply voltage. Herein, the multi-loop oscillator further 10 comprises a loop selection section for selecting one loop from among the first to the Nth delay loops, according to potential variation of the supply voltage. Further, the multi-loop oscillator further comprises a supply voltage detection circuit section for detecting variation of the 15 supply voltage, and the supply voltage detection circuit section controls an operation of the loop selection section. In the multi-loop oscillator, an oscillation frequency of the ring oscillator can be adjusted. Accordingly, when the ring oscillator is employed, an abnormal operation of a pumping 20 circuit operating in response to an oscillation signal of the ring oscillator can be considerably reduced.